

MEMORANDUM

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| DATE: | June 27 th , 2016 |
| FROM: | Eric Lancaster |
| SUBJECT: | Weekly Progress Report @ Gold King |
| TO: | Kerry Guy |

Project: Gold King Interim Water Treatment Plant (IWTP)

Reporting Period: June 20 – June 27

Location: Gladstone, Colorado

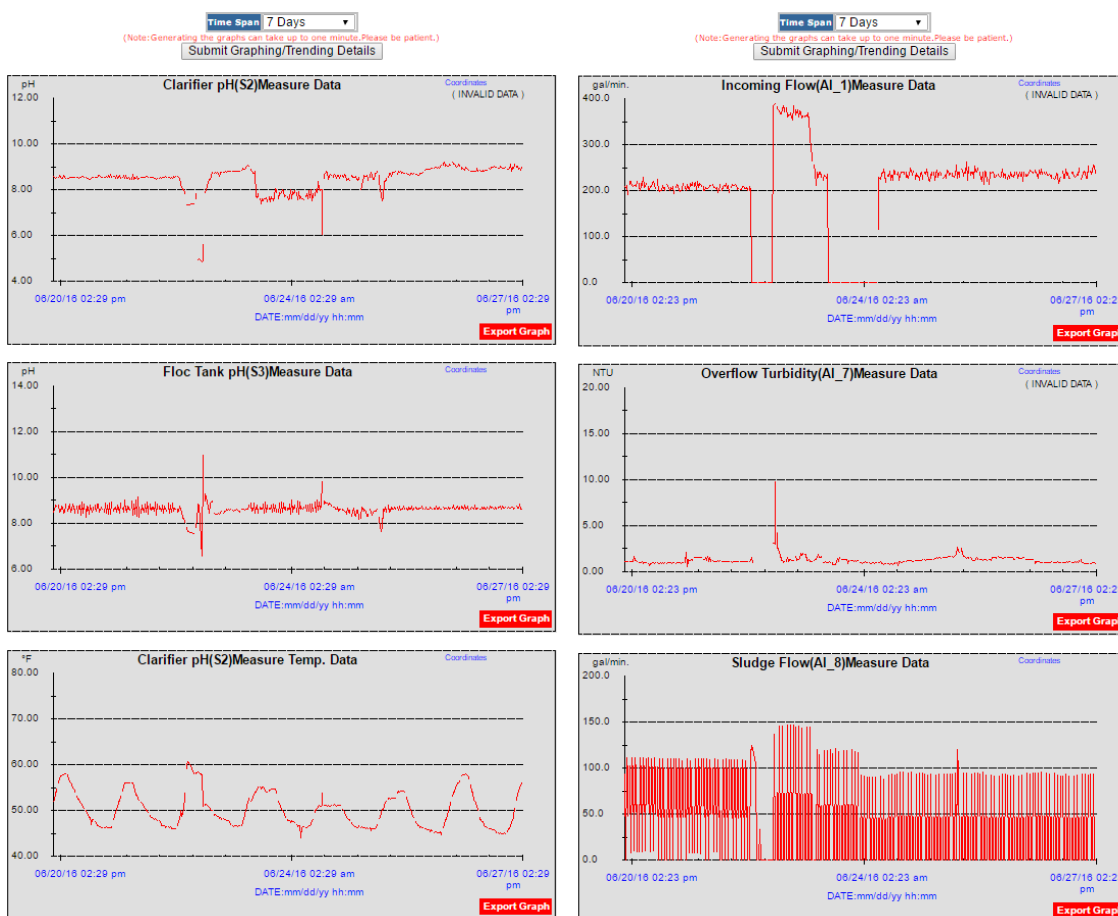
Report No.: 25

Prepared for: Emergency Response Unit – US EPA Region 8

I. General Operations Summary:

IWTS Function/Upsets

- The following graphs provide trending information during the previous 7 days. The dataloggers collect control information from the Lime Circuit (left) and Flow Circuit (right) Programmable Logic Controllers (PLCs) at the Gold King IWTP. Over the reporting period (6/20/16 – 6/27/16 inclusive) Alexco treated 5.14 million gallons at an average flow rate of 510 gpm (the week before was 518 gpm).



- Please note: Several days each week, the Alexco operators check the pH at both the floc tank and clarifier discharge. During this time, the probe is placed in vinegar (acid), and three pH buffers – 4, 7, and 10. While the probe is in the acid/buffer, the datalogger may capture one of those points for tracking purposes, which explains the occasional pH spikes seen on the graph. In addition, instantaneous spikes of the Overflow Turbidity Meter are associated with routine cleaning, which can cause the meter to spike temporarily up to 100 NTUs.
- Over the last few weeks, TSS levels coming into the IWTP have increased, causing occasional spikes at the discharge as measured by the turbidimeter and requiring higher flow rates to the bags and occasional flushing of the clarifier.
- Since early May, lime consumption has drastically increased due to lower pH levels from the mine. A sample at Pond 1 inlet on 6/25 measured 3.32.
- Because of the higher TSS loading, the Phase II clarifier is currently in operation.

Communication System Function Status

- No issues – reliable operations during the reporting period.

Facility or System Related Work, including Repairs & Completions

- ER has removed all sludge from dewatering cells A and B. Cell A has been relined and additional bags have been placed and are back in operation.
- Lange Containment is scheduled to Line Cell B Tuesday, June 28th.
- Summit Mechanical is scheduled to repair the 12" HDPE line Tuesday, June 28th.
- Low pH water caused the butterfly valves at the inlet to the reactor tank to be eaten away. On Wednesday, June 22nd, the valves were replaced with 8" SS gate valves. At that time, a 1" thick build-up of sludge was found within the 8" HDPE pipeline that convey water from Pond II to the IWTP. Badger is scheduled to support jetting those pipes on Wednesday, June 29th.

II. Identified Problems, Causes, and Solutions (Planned or Implemented)

- **Spring Melt Contingency Updates:**
 - IWTP – With both clarifiers in operation, the system has been removing 96% - 99% of the required metals (Al, Cd, Cu, Fe, & Zn).

III. System Inspections – Specific elements inspected and finding

- N/A

IV. Site Status

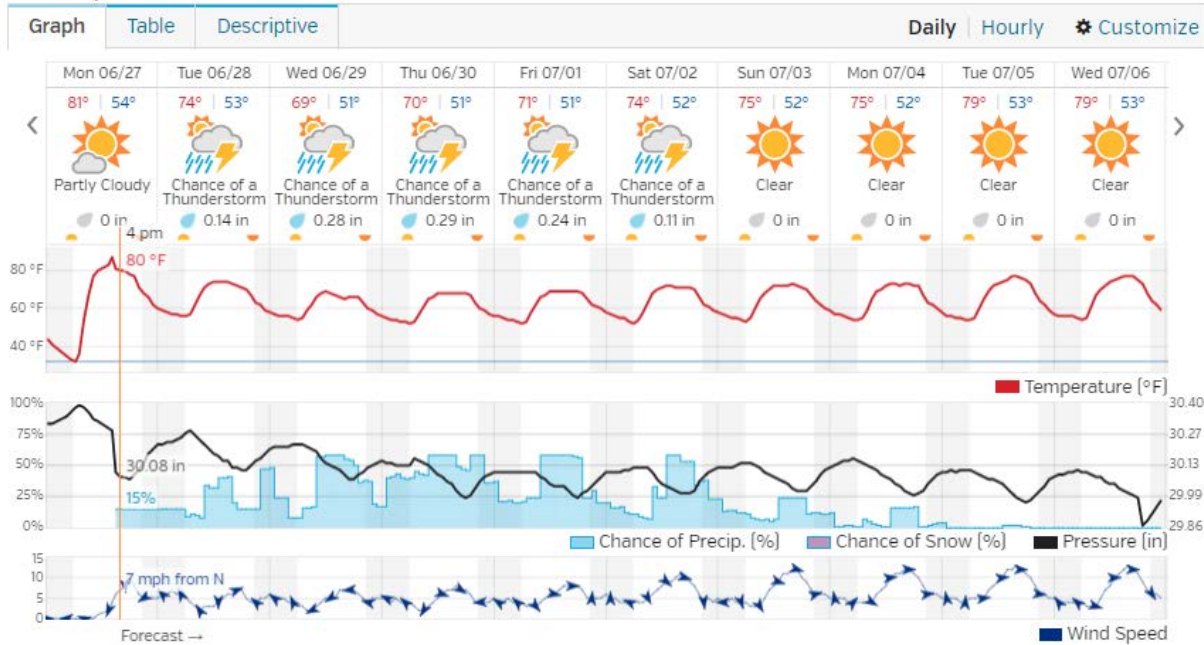
Personnel and equipment onsite

- Alexco currently employs one full-time employee (FTE) who lives in Silverton and oversees all operations at the Gold King IWTP. He is supported by remote operators in Denver, and local sub-contractors as needed.

Weather conditions

- Weather Underground Report for Silverton, CO (6/27/2016 – 7/06/2016)

10-Day Weather Forecast



Pictures from Site



Photo 1: 12" HDPE discharge pipe was extended & buried – Taken on 6/23/2016



Photo 2: Removal of bags from Cell B – Taken on 6/23/2016



Photo 3: SS 8" control valves upstream of reactor tank – Taken on 6/23/2016